



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
|-----------------|-------------|----------------------|---------------------|
|-----------------|-------------|----------------------|---------------------|

09/182,626 10/29/98 WANG

D QCPA471

EXAMINER

WM01/0723

QUALCOMM INCORPORATED
ATTN: PATENTS DEPARTMENT
5775 MOREHOUSE DRIVE
SAN DIEGO CA 92121-1714

NGUYEN, F

ART UNIT

PAPER NUMBER

2674

DATE MAILED:

07/23/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/182,626

Applicant(s)

WANG ET AL.

Examiner
FRANCIS NGUYEN

Art Unit
2674



— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-56 is/are allowed.
- 6) ☒ Claim(s) 1-6 and 14 is/are rejected.
- 7) ☒ Claim(s) 7-13 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirements.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 4 20) ☐ Other: _____

Art Unit: 2674

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Kanatani et al. (U.S. Patent 5,414,443).

3. As to **claim 1**, Kanatani et al. discloses a system (**source driver and gate driver for TFT liquid crystal panel 100 as shown in figure 1**) for providing a first signal (**scanning pulse, column 1, lines 51-53**) to a circuit (**circuitry of each display pixel, shown in figure 1 as part of a plurality of display pixels that make up TFT LCD panel 100**) and receiving a second signal (**analog signal** , column 8, lines 29-32, said signal located on signal electrode portion which is part of said circuitry) from said circuit over an electrical connection (**intersection of scanning electrode and signal electrode to make up a display pixel as shown in figure 1**), said system comprising:

first means for providing said first signal (**gate driver 300 as shown in figure 1**) to said circuit via a first electrical path (**scanning electrode located at display pixel shown in figure 1**), said first signal having alternating first and second states (**scanning pulse to scanning electrode**

Art Unit: 2674

in sequence, column 1, lines 51-53, output of gate driver as shown in figure 16, scanning pulse as shown in figure 19(a), column 15, line 65 through column 16, line 3) ;

second means for generating a second signal (source driver generating analog signal on signal electrode as shown on figure 1); and

third means for receiving said second signal via said first electrical path, said second signal being received during said second state of said first signal (TFT at intersection of scanning electrode and signal electrode, serving as switch as shown in figure 1) .

4. As to **claim 2**, note the same citation for claim 1. Note that Kanatani et al. discloses **scanning signal as shown in figure 19(a)** (also column 15, line 65 through column 16, line 3) has continuously alternating states (+12V and -12V).

5. As to **claim 3**, note the same citation for claim 1. Kanatani et al. discloses said first signal provides power to said circuit (**voltage applied to selected pixel electrode** as shown in figure 17(a) when scanning pulse is provided, column 1, line 67 through column 2, line 3) when said first signal is in said first state (+12V as shown in figure 19(a))

6. As to **claim 4**, note the same citation for claim 1. Kanatani et al. discloses means for adjusting a duty cycle and/or frequency of said first signal (**control circuit 4** as shown in figure 1, column 10, lines 7-9, **inverse of frequency of square wave shown in figure 18**).

7. As to **claim 5**, note the same citation for claim 1. Kanatani et al. discloses first means including a signal generator (**counter electrode drive circuit 8 generating a square wave**, column 14, lines 62-67).

Art Unit: 2674

8. As to **claim 6**, note the same citation for claim 1. Kanatani et al. discloses said signal generator includes a voltage source (**power source Vbb and Vdd**, column 14, lines 62-67), a switching circuit connected to said source and a control circuit connected to said switching circuit (**transistors as part of 501 and 502 devices shown in figure 16**) , said control circuit effective to cause said switching circuit to output said first signal having first and second states at said duty cycle (**control circuit circuit 4 providing timing signals as scan clock pulse and scan start pulse shown in figure 16**) .

9. As to **claim 14**, note the same citation for claim 1. Kanatani et al. discloses means for processing the second signal (**supplemental capacitance Cs as shown in figure 12**).

10. The prior art made of record and not relied upon is considered pertinent to applicant' s disclosure.

| | | |
|-------------|-----------|-----------------|
| U.S. Patent | 5,915,015 | Thornton |
| U.S. Patent | 6,002,946 | Reber et al. |
| U.S. Patent | 5,555,157 | Moller et al. |
| U.S. Patent | 5,584,054 | Tyneski et al. |
| U.S. Patent | 5,797,482 | Lapointe et al. |

Reference Thornton is made of record as it discloses a flip phone with housing having a hinge pin.

Reference Reber et al. is made of record as it discloses a handheld device with housing having a flip.

Art Unit: 2674

Reference Moller et al. is made of record as it discloses a pen-computer with housing having a flip.

Reference Tyneski et al. is made of record as it discloses a communication device with housing having a moveable flap.

Reference Lapointe et al. is made of record as it discloses a keypad structure with housing having an electroluminescent backlight.

Allowable Subject Matter

11. **Claims 7-13** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. The following is a statement of reasons for the indication of allowable subject matter: none of above cited art or combination of any prior art disclose **a unique feature of a system for providing a first signal to a circuit and receiving a second signal from said circuit over an electrical connection, said system comprising first means for providing said first signal to said circuit, further comprising a signal generator having a switching circuit, a control circuit wherein said switching circuit has a control terminal connected to said control circuit, one terminal connected to said source and one terminal connected to said electrical path.**

13. Claims 15-56 are allowed.

14. The following is a statement of reasons for the indication of allowable subject matter:

Art Unit: 2674

As to **claims 15-30, and 56**, none of above cited art or combination of any prior art disclose a unique feature of a system/method for providing input from a keypad and providing lighting to said keypad over an electrical connection comprising: key detection means for providing a signal over said electrical connection indicative of a key pressed on said keypad; lighting means for lighting said keypad via said electrical connection.

As to **claims 31-38**, none of above cited art or combination of any prior art disclose a unique feature of a mobile communications device including an integrated personal digital assistant and cellular telephone comprising:

fifth means for providing a first function and a second function between a second means for processing communication signals and third means for providing an input signal in response to a user input via a fourth means for connecting said third means to said second means via said fourth means so that said first function and said second function appear to a user to be implemented simultaneously.


As to **claims 39-55**, none of above cited art or combination of any prior art disclose a unique feature of a personal digital assistant comprising: a keypad mounted on a flip for providing a first input signal, a body having a computer for processing said first input signal, a pin contact between said flip and said body for providing an electrical connection between said flip and said body, multiplexing circuit for selectively providing said first input signal from said keypad to said body and providing a second signal from said body to said keypad via said electrical connection.

Art Unit: 2674

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Francis Nguyen whose telephone number is (703) 308-8858. The examiner can normally be reached on weekdays from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (703) 305-4709. The fax phone number for this Group is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700.



Francis Nguyen

July 18th, 2001